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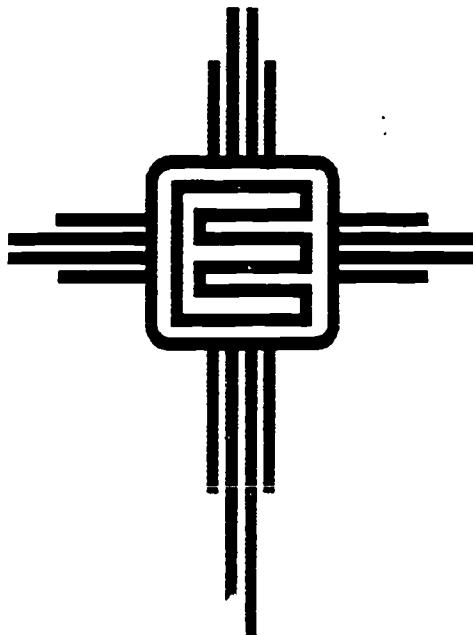
**ABSTRACT**

Objectives and progress of the Student Impacts and Outcomes Committee created in the summer of 1985 at Eastern New Mexico University are reported. The committee was formed to measure and assess the impact that 4 years of college have on a student, and intends to track an entire entering freshman class from the time the students apply until they leave, with a follow-up 2 to 5 years later. It will then track every fourth entering freshman class, i.e., as one class enters its senior year, the new entering freshman class will become the study population. Five subgroups were formed to consider knowledge outcomes, skills outcomes, attitudes and values, relationship with the university, and occupational outcomes. Each subgroups will identify the most appropriate data to collect and possible data collection instruments. Updates of the progress of each of the five subgroups are presented. Two recommendations are offered: (1) to measure general knowledge outcomes, the short form of the American College Testing Program's College Outcome Measures Program Examination (ACT COMP) should be used for pre- and post-testing; and (2) the ACT Entering Student Survey, the ACT Withdrawing/Non-returning Student Survey and the ACT Student Opinion Survey should also be employed. Two policy recommendations are also offered: the mission statement should be rewritten, and the philosophy of the general education component is needed in writing. (SW)

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STUDENT IMPACTS AND OUTCOMES COMMITTEE  
A REPORT TO THE CAMPUS



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Student Impacts and Outcomes Committee

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## Preface

America's belief in the value of a college education is diminishing. For a number of years, postsecondary education was viewed as the stepping stone to success, in the market place and in life. The federal government supported postsecondary education with contracts and grants, and awarded financial aid to students. State governments built new campuses, increased programs, and developed new funding sources. The commitment to postsecondary education was pervasive.

However, over the past few years postsecondary education's support has crumbled. From every quarter, critics challenge colleges and universities to demonstrate that they are efficient and effective. Declining enrollments have forced institutions into a mad scramble for students and funds. States are finding themselves with too many institutions and too little revenue to continue the level of support of past years. As agendas change, and as America grows grayer, postsecondary education must struggle to maintain present levels of support much less increase that support to pay for new programs, for increased salaries, and to repair deteriorating physical plants.

Certainly the erosion of support is evident here in New Mexico. After years of building new junior colleges and branch campuses, the state of New Mexico is now experiencing declining revenues, as extractive industries in particular face reduced demand and increased foreign competition. Additionally, other constituencies within the state are seeking larger shares of the shrinking state dollar. Initiatives have already been proposed to reduce the size and scope of postsecondary education in New Mexico. As revenues continue to be smaller than anticipated, reductions and eliminations of both programs and possibly entire campuses are possible.

Not unsurprisingly, colleges and universities have begun to react to these life-threatening assaults. For the first time in memory, colleges and universities are having to justify their existence, their value, to a world that no longer assumes that a college education can provide both tangible and intangible rewards unattainable elsewhere in our society. Currently, a number of studies are underway at universities across the United States to measure and assess the impact they have on their students.

Eastern New Mexico University has begun its own efforts to measure and assess the impact that four years of college have on a student. In the summer of 1985, President Robert Matheny created a Student Impacts and Outcomes Committee. The charge to this committee was three fold: (1) to design and implement a comprehensive student outcomes and impact study; (2) to oversee the study and protect its integrity; and (3) based on the work of the committee, to make policy recommendations to the Vice President for Planning and Analysis.

## Introduction

This report is to inform the campus of the progress the Student Impacts and Outcomes Committee has made during the last several months. Many issues have been raised, several significant decisions made, and policy recommendations proposed. In order to present the material clearly, this report is divided into the following sections: (1) Background; (2) Subgroup Reports; (3) Recommendations for the Study; (4) Policy Recommendations; and (5) Summary and Conclusions.

## Background

In order to establish a better understanding of the impact Eastern New Mexico University has on its students and to provide "hard" data upon which to base curricular decisions and develop policy, President Matheny commissioned the Student Impacts and Outcomes Committee. At the first meeting, the committee agreed that its major responsibilities were as follows: "...(1) to oversee the study in order to protect its integrity; (2) to identify what data to collect and when to collect it; (3) to issue reports; (4) to authorize specific analysis and reports; and (5) to make policy recommendations to the Vice President for Planning and Analysis based upon findings reported."

The Office of Institutional Research provides staff support to the committee. This support includes but is not limited to providing technical assistance in the development of the study, developing data management and analysis tools, drafting reports, and making recommendations to the committee on needed actions, possible analysis and reports.

A number of commitments have guided the work of the committee so far. First, the committee recognizes that social science research often has methodological problems

which cast doubt on both the validity and reliability of a study. Clearly a study of this magnitude, conducted with limited human and financial resources, will inevitably carry with it serious validity and reliability concerns. While the study results may be questioned, the committee believes that it is better to note the problems and potential intervening variables that may contaminate the study than spend years refining the study in hopes of discovering the perfect design.

Second, the committee believes that tentative judgments are better than no judgments at all. Therefore, the committee will try to identify factors that it thinks are important, while noting the conceptual and methodological issues that might produce in different conclusions. The requirements of scholarship require that the committee openly discuss the possibility of error, yet professional obligation also requires the committee to make judgments and form conclusions.

Third, the committee wants to provide the broadest possible dissemination of information that it gathers to the university community. Departments and individual faculty members can probably make the best use of collected information. Therefore, the committee plans to be as open as possible about its efforts and invites questions about its work at any time. This report is part of the effort to explain the work of the committee to colleagues.

Finally, the committee is committed to drawing conclusions and making recommendations whenever possible. This means that the committee will not be just a collector of data but also a user of data. The committee's task will not be to single out a group, an area, or a department for scrutiny. If, however, in the course of our work we discover areas of concern, we will address those concerns in reports and recommendations. Some of our conclusions will be applauded, some scorned. Yet the committee is committed to the principle of free inquiry that should and must characterize a university community.

The starting point for this study was the initial proposal prepared by Dr. Robert Wilkinson. The proposal outlined the general design and methodology, identified major decision points which this committee would need to address, and provided a visual design of the data collection points.

As a brief overview, the study is designed as a comprehensive outcomes study to be implemented on a cyclical basis (every four years). The committee's intention is to track an entire entering freshman class from the time they apply to Eastern until they leave with a follow-up two to five years later. Further, it is the intention of the committee to track every fourth entering freshman class. That is, as one class is entering its senior year, the new entering freshman class will become the new study population. This type of study incorporates both the traditional attrition/retention design with the classical outcomes study, thereby providing a wealth of data about students. This type of research design will provide data that can be analyzed to show trends, changes, and between-class comparisons. Finally, since the committee is interested in studying a student's progression through the institution, data collection will start with the enrollment application process. However, for the purpose of the study, actual student contact will not begin until after the student has actually enrolled as an entering freshman.

With its charge refined and with the initial proposal as a starting point, the committee used the following questions to guide its preliminary work.

1. What is the committee measuring?
2. What are the data sources?
3. What procedures does the committee need?
4. What general considerations should guide the process?

It quickly became apparent that there was insufficient time to perfect the design, select appropriate data collection instruments, develop the accompanying data collection processes, and then begin the study by the fall 1985 semester. Therefore, the committee elected to postpone initiation of the study for one year, while a one year pilot study is conducted. The pilot study, already begun, will more adequately address the four central questions and prepare for the fall 1986 semester. Within the first year pilot study period, the committee set the following timetable to follow.

December 1985      Draft proposal outlining the entire study will be prepared for presentation to the campus for review and comment.

April 1986      Final guidelines for the study will be completed and a report prepared detailing all aspects of the study.

May 1986 All necessary material are to be ordered and the first phase of the study initiated.

The task before the committee is a monumental one, requiring a substantial commitment of time and energy by all involved. To provide a sense of direction, the committee was divided into five (5) subgroups based on a classification of possible outcomes: knowledge outcomes; skills outcomes; attitudes and values; relationship with the university; and occupational outcomes. Each subgroup is suppose to identify the most appropriate data to collect and then identify possible data collection instruments. Each subgroup will make presentations to the committee. These reports are to include what they found, any limitations they may have identified, any problems they are having, and their recommendation to the committee. Finally as each subgroup works on its area, each will make recommendations to the committee on any policy issues that need to be advanced to the Vice President for Planning and Analysis. The subgroups are as follows.

1. Knowledge Outcomes	Dr. George Mehaffy and Mr. David Noblett
2. Skills Outcomes	Dr. Thurman Elder and Dr. Pat Caldwell
3. Attitudes and Values	Dr. Eldon Walker and Dr. Renee Neely
4. Relationship with University	Dr. Richard Walsh and Ms. Carol Holden
5. Occupational Outcomes	Dr. Dale Davis and Mr. Winston Cox

Data collection is a critical problem for each of the subgroups. First each subgroup must decide what data are necessary to form conclusions about student impacts and outcomes. If appropriate data are identified, can they be collected. Finally, the subgroup must identify data already collected, to avoid needless duplication of effort.

### Subgroup Reports

#### Knowledge Outcomes

The subgroup studying general knowledge has identified the ACT College Outcome Measures Program (COMP) Examination as the instrument that best measures what we want to measure. Furthermore, this subgroup recommends that the ACT COMP Objective exam, a two-hour version of the longer exam, be used instead of the longer more complex exam. This will reduce both the financial and human cost involved in administering and scoring the exams.

There are, however, two broad issues which still need to be addressed. First and foremost, should a pilot study be conducted to determine the utility of the results, test the examination process, and develop a baseline of information? Second, will the results of the COMP Exam be in a form which will lend itself to useful analysis and interpretation?

Finally, there is the larger issue to this recommendation. Does the ACT COMP Exam measure those things which we feel are important? Linked to this issue is another question: To what extent can Eastern claim credit for changes in its students? That is, are changes in students due to maturation, external variables, or derived from the experience of attending Eastern?

### Skills Outcomes

The subgroups studying change in student's skills examined the ACT College Outcome Measure Program (Comp) and concurs with the Knowledge Outcomes subgroup that the short-form is a good choice for the study's purpose. Assessing computational skills requires an instrument that is modest in scope and in its degree of difficulty to be practical. Multiple-choice testing (the format most nationally-normed computational test employ) tends to "test" discrete mathematical concepts or skills, rather than the ability to apply math knowledge and common sense to solve problems (e.g., reading a blueprint). This kind of testing, the subgroup feels, meets the purpose of this Committee's study. We will continue, however, to examine other tests (from ACT or MAA) and consider generating a local exam.

The short form COMP does not include any sort of writing on the part of the students, a skill that this subgroup feels must be part of this study. Not only does writing measure content mastery, it assesses that content on an individual basis, holistically and humanistically. Holistic scoring of student writing samples, by a cross-section of faculty, would be the best approach to this testing. Problems that arise are these: Given the bias possible in writing tasks, how are such tasks to be determined? How are the writing evaluators to be selected and trained to score holistically? Since holistic scoring cannot represent absolute value but only meaning according to established criteria and for a particular group,

can a writing sample stand as a meaningful measure of the university's educational experience for students? The subgroup believes that these problems can be solved and will continue to explore ways of implementing such a testing component.

#### Attitudes and Values

This subgroup has been meeting to determine the best method of assessing the impact of a university experience on the values and attitudes of its students. Three major questions are being asked: (1) what values and attitudes are affected by the experience, (2) how can these best be measured, and (3) how can this be integrated into the larger study.

The subcommittee is still attempting to reach agreement on the first question. Some attitudes toward self and society have been identified. However, the committee has not decided whether these are attitudes/values that can be (a) assumed to be changed by a college experience and necessary for inclusion or (b) operationally defined so they can be measured with any degree of reliability or validity. These decisions are complicated when any attempt is made to address only those values uniquely changed by the university and not by outside experiences. This question may be not answerable. If not, the lack of a control is a major limitation of the study.

The members of the subcommittee are not ready to submit a proposal for the implementation of an attitudes/values portion of the study. The questions just presented have not been answered to the satisfaction of the subgroup. However, the subgroup has identified several variables that could be assessed through this study. These variables include intellectual development, personality changes (including such characteristics as maturity and responsibility), cultural development, moral development, and social development. These variables overlap and supplement the

attitudes/values toward self, personal goals, family, community, society, and others of primary interest to this study.

One of the tasks before the subcommittee is narrowing the focus of the variables to be investigated. Preliminary discussions have centered around attempting to agree on those variables which (a) can be assumed to be influenced by a university experience, (b) can be measured reliably and validly, and (c) should be included as part of the outcomes study. So far, the subgroup has not reached any conclusions regarding those variables that meet these criteria.

If an attempt is made to incorporate most of the areas of interest into a study of changes in attitudes/values, the subcommittee has several options. One alternative is to design an instrument. This would allow the committee to measure the changes in all or most of the categories at the same time. It would eliminate the need for several different samples but would require the reliability and validity of the instrument be established before it could be used with any confidence.

A second option is to select a few standardized instruments for use. This would eliminate the need to establish the reliability and validity of the instruments but would mean additional sampling problems and some questions on interpretation of results because of differences in norms.

The third and ideal alternative is to find one instrument that would cover as many of the areas of interest as possible. Sampling and norm problems would be minimal. However, it might mean sacrificing some of the areas totally or finding alternative means of measuring the impact on them. This option is the preference of the subgroup.

The subgroup is currently reviewing the relevant literature to determine how other institutions have measured changes in attitudes/values. Thus far, a single instrument that could be used to cover all of the areas has not been found. Some

methods are questionable in that they involve the administration of personality measures or pose ethical problems for the university. While the subgroup is not prepared to propose a specific method of data collection, it does suggest that a pilot effort in this area be conducted this spring followed by a follow-up study one year later.

#### Relationship With the University

The Relationship with the University subcommittee presented the following outline as a guide for the work they are doing. This outline proposes the types of questions to ask, the types of data that can be or are already collected, what similar types of activities are currently under way, and possible limitations to the study.

### I. GENERAL PLAN OF ACTION

#### A. DEVELOP A PROFILE OF THE STUDENT IN THE UNIVERSITY.

##### 1. The profile will include such items as:

- a. Academic
- b. Demographic
- c. Enrollment History
- d. Residency
- e. Residential Preference Patterns
- f. Extracurricular Plans
- g. Racial or Ethnic Background
- h. Religious Preference
- i. Past Student Profile
- j. Entering Students Interests
- k. Graduating Seniors
- l. High School Background
- m. Ability Profile

##### 2. Sources of Data:

- a. ACT/Distance From Home
- b. ACT/First Year Predicted GPA's
- c. ACT/SAT Scores
- d. Planning and Analysis
- e. Registrar
- f. Housing

- g. Survey/ACT
- h. Survey/NCHEMS
- i. ACT/Home Community
- j. ACT/Extra Curricular Plans
- k. ACT/Family Income
- l. ACT/Profile
- m. Planning and Analysis, ENMU

B. ESTABLISH INDIVIDUAL EDUCATIONAL DEVELOPMENT GOALS OF OUR STUDENTS

1. Types of Questions:

- a. Intended Majors
- b. Purpose of Entering College
- c. Needs of Students
- d. Why Eastern was Selected

2. Sources of Data:

- a. ACT, "Entering Student Survey"
- b. ACT, "Student Opinion Survey"
- c. ACT, Profile

C. DETERMINE PLACEMENT PATTERNS IN THE UNIVERSITY SKILLS/ DEVELOPMENTAL STUDIES PROGRAM

1. Areas:

- a. Math
- b. English
- c. Reading
- d. Intro. to University Studies

2. Sources of Data:

- a. SAS - US/DS
- b. Departments: Math/English/Reading/ACS

D. RESEARCH STUDENT SUCCESS PATTERNS

1. Factors:

- a. Retention/Attrition Rates
- b. Tracking Entering Students
- c. Opinions of Withdrawing/Non-Returning Students

2. Sources of Data:

- a. SAS Retention and Tracking Records
- b. ACT/"Withdrawing and Non-Returning Student Surveys"
- c. Planning and Analysis

E. REVIEW THE CHANGES THAT STUDENTS MAKE IN THEIR CHOICES OF MAJORS

1. Sources of Data:

- a. College Records Clerks
- b. Advising Center
- c. Computer Center

F. STUDY THE BEHAVIOR PATTERNS OF ENROLLED STUDENTS

1. Areas of Interest:

- a. Level of satisfaction/utilization with service programs.
- b. Level of satisfaction with academics
- c. Level of satisfaction with Admissions
- d. Level of satisfaction with rules and regulations
- e. Level of satisfaction with facilities
- f. Level of satisfaction with registration
- g. General level of satisfaction

2. Source of Data: ACT - "Student Opinion Survey"

G. STUDY THE LEVELS OF ACHIEVEMENT IN SUBSEQUENT EDUCATIONAL EXPERIENCES

Source of Data: ACT, "Former Student Survey"

H. ASSESS THE RELEVANCE AND CONTRIBUTION OF PAST EDUCATION TO SUBSEQUENT EDUCATIONAL EXPERIENCES

Source of Data: ACT, "Former Student Survey"

Occupational Outcomes

After studying the materials provided by the Office of Institutional Research, it became apparent that there is no "one best way" to address the problem of measuring and assessing the impact Eastern has on its students and how alumni believe Eastern affected them.

One of the major problems is that each institution tends to declare itself unique, and in so doing is saying, in effect, that to arrive at valid conclusions regarding the school, one ought to use a unique validating instrument. This in itself creates problems(e.g., how can we make meaningful comparisons, to name but one). A more fundamental problem is that most educational institutions do a poor

job of framing their mission statements and the goals and objectives that are meant to make the mission statement a reality.

Would the college of Liberal Arts be interested in using the same mission statement as the College of Business? In spite of the external pressures to be specific, we will be painting with a very broad brush even where we deal with meaningful and accurate goals and objectives.

After presenting that caveat, this subcommittee submits the following recommendation. We have examined the "former-student questionnaire" and "long-term alumni questionnaire" developed by NCHEMS and the "alumni survey" published by ACT. This subgroup recommends that the ACT "Alumni Survey" be used and that additional questions be developed and approved by the committee.

#### **Recommendation for the Study**

While the committee is still in the process of identifying the types of data to collect, what instruments to use, and what data collection procedures are needed, several definite recommendations have been advanced from the subgroups. Several of these recommendations were presented in the previous section but for the value of clarity they will be presented again along with several other recommendations which developed through general discussions.

Recommendation 1. To measure general knowledge outcomes the "Knowledge Outcomes" subgroup recommends the short form of the "ACT COMP" exam in a pre-test/post-test setting.

Recommendation 2. The "Relationship with the University" subgroup recommends the use of: (a) the ACT Entering Student Survey; (b) the ACT Withdrawing/Non-returning Student survey; and (c) the ACT Student Opinion Survey as the base data collection instrument. This subcommittee also recommends using the "student file" and the "transcript file" as secondary data sources for the study population.

Recommendation 3. The "Occupational Outcomes" subgroup recommends the use of the ACT Alumni survey plus thirty additional questions to collect data on the alumni.

Recommendation 4. Members of the committee recommended that more thought and consideration be given to the possibilities of including transfer students in the study, as they seem to constitute a unique situation within the student body.

Recommendation 5. The committee chair recommended the following time table be followed.

December 1985      Draft proposal outlining the entire study will be prepared for presentation to the campus for review and comment.

April 1986      Final guidelines for the study will be completed and a report prepared detailing all aspects of the study.

May 1986      All necessary material are to be ordered and the first phase of the study initiated.

Recommendation 6. The first recommendation to come from the committee was to delay the initiation of the study for one year so there would be more time to develop the study and design the data collection procedure.

#### **Policy Recommendation**

Making policy recommendation to the Vice President for Planning and Analysis is one of the specific charges to this committee. As the committee has been designing the study, two specific issues seem to surface continually. The first issue centers around the mission of the university; the second issue focuses on the purpose of Eastern's general education component of the curriculum and the philosophical base upon which Eastern's curriculum is based.

Recommendation 1. The mission statement should be rewritten and widely disseminated

Recommendation 2. As part of the NCA Self-Study, there should be a written philosophy of Eastern's general education component. This written

statement needs to identify what the purpose of Eastern's general education is and how that purpose is achieved.

### **Summary and Conclusions**

The Student Impacts and Outcomes committee has begun addressing issues which are on the cutting edge of research in higher education. Undoubtedly the question of student outcome will continue to dominate the higher education agenda in the years to come. As this report demonstrates, the Student Impacts and Outcomes committee has made significant progress, but it still has a way to go before an Impacts and Outcomes Study can be initiated. The timetable the committee has set for itself is ambitious but realistic. The committee has been dealing with curricular issues and investigating policy areas in an effort to identify what types of data need to be collected to evaluate the "Eastern Experience." This effort has already resulted in two policy recommendations, as well as encouraging discussion around the campus about the impact ENMU has on its students.

So far, the following survey instruments have been recommended for use in the study: the ACT COMP Exam; the ACT Entering Student Survey; the ACT Withdrawing/Nonreturning Student Survey; the ACT Alumni Survey; and the ACT Student Opinion Survey. There is still considerable work to be done in two areas: (1) determining how and if the committee should evaluate changes in attitudes and values and (2) how to evaluate computational and writing skills.

As for the work yet to be done, there are several more stages before the process of implementing this study can begin. First, the committee has to agree on what data to collect. Second, data collection processes have to be developed for all stages of the study. Third, the study must be refined and detailed. Fourth, an

estimated budget needs to be developed. Finally, the study must be presented to the entire campus for review and comment.

The tasks before the committee, therefore, are numerous and complex; the road ahead is littered with obstacles. But we have begun. Furthermore, the work of the committee has powerful promise. It holds out the potential for dramatically affecting the quality of the undergraduate experience at Eastern New Mexico University.